OPEN JUSTICE PREREQUISITES: ICT USE AND ACCEPTANCE IN THE GREEK JUSTICE SYSTEM

By **Athanasios DELIGIANNIS**, OGP IRM for Greece (Openwise) / department of Informatics and Telematics, Harokopio University of Athens, Greece.

The Greek Ministry of Justice, Transparency and Human Rights (MoJTHR) has committed itself through the country's third Open Government Partnership Action Plan to significantly improve access to court data and documents. A necessary prior step in achieving this is the adoption, acceptance and use by judges and court clerks of a new Integrated Civil and Criminal Court Case Management System (OSDDY), the first such ICT system to be introduced in Greece. The study presents the usage patterns for judges and clerks of current ICT in courts as well as user intent to work with the new OSDDY system. The results also highlight the sample's perceived benefits and risks of using the new ICT system.

INTRODUCTION

The adoption and use of ICT systems by public sector organizations and institutions is an important efficiency and productivity growth factor. The purpose of this study was to investigate and document the user experience and acceptance of specific software applications by magistrates and clerks, the degree of usefulness, ease of use perceived and user intent to work with the new ICT systems planned by the Greek Ministry of Justice and any differences in the degree of acceptance of the above among magistrates and officials.

A) Key figures for the Greek Justice system

The Greek justice system, in comparison to other European Union countries, is characterized by low ICT incorporation and acceptance as well as long delays in processing court cases. This, despite the fact that other indicators such as the number of judges and lawyers per capita are well above their respective EU country averages[1].

[1] COUNCIL OF EUROPE'S EUROPEAN COMMISSION FOR THE EFFICIENCY OF JUSTICE (CEPEJ) *Report on the evaluation of the judicial system*. CEPEJ Studies. Strasbourg: Council of Europe publishing, 2015.

The acceptance of public sector ICT systems in Greece has been examined by Tsakanikas et al.[2]. An initial survey of ICT systems in operation in the Ministry of Justice has been carried out as part of the work of the country's eGovernment team[3] but no specific study of ICT acceptance has been carried out for the same Ministry.

According to 2013 data[4] the number of professional judges in Greece is at 3877. The observed trend for the cycle 2010-2013 is an increase of 17%. More specifically, in Greece there are 35 judges per 100 000 inhabitants. This figure is above the EU median of 18.9 judges per 100 000 inhabitants) and the observed tendency for 2010-2013 is an increase of 19.6%. The number of clerks employed at the Ministry of Justice is at 5 376 while data for 2010 to 2013 shows a decrease of 20.5 percent.

In Greece, 42 177 lawyers practice, 0.2 % more than in 2012 and 0.9 % more than in 2010[5]. These figures represent 381.3 lawyers per 100 000 inhabitants, a figure significantly higher than the EU average of 105.7 lawyers per 100 000 residents. The *per capita* expenditure for the functioning of the judicial system in Greece amounted to €40.8 compared to the average of the EU countries which is €64.6. Of the total Ministry of Justice's budget, €300,000 were allocated in 2010 for the development of ICT systems while €5,947,969 were allocated in 2011.

B) Greek Justice Ministry ICT practices and priorities

In implementing the countries first and second action plan, the Greek Ministry of Ministry of Justice, Transparency and Human Rights has adopted an Open by Default principle for public sector data and documents (Law 4305/2104). The Ministry of Justice has also committed as part of its third and current (2016-2018) OGP Action Plan to complete an Integrated Judicial Case Management System for Civil and Criminal Justice (IJCMS – OSDYY/PP), to provide a case-law database which includes anonymized administrative courts' and Court of Audit decisions and to implement a digital court proceeding recording, storage and retrieval system.

Almost all ICT systems currently operating within the Ministry of Justice entities – including General Secretariat for Equality, courts, detention facilities, salaried land registries and other –are based until early 2016 on commercial software either off-the-shelf or custom made. The exception was the current website of the

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[2] A. TSAKANIKAS, S. DANCHEV, I. GIOTOPOULOS, E. KORRA, & G. PAVLOU, ICT Adoption and Digital Growth in Greece. *Foundation for Economic & Industrial Research*, 2014.

[3] A. DELIGIANNIS, & □. PRIFTIS, *Prime Minister's e-Government Group proposals on e-Justice.* [In Greek], 2011. https://goo.gl/6N29oK

[4] GREEK MINISTRY OF ADMINISTRATIVE REFORM & E-GOVERNMENT. *Open Government Partnership Second Greek Action Plan,* 2014. https://goo.gl/o2sxoV

[5] COUNCIL OF EUROPE'S EUROPEAN COMMISSION FOR THE EFFICIENCY OF JUSTICE (CEPEJ) *Report on the evaluation of the judicial system.* CEPEJ Studies. Strasbourg: Council of Europe publishing, 2015.

Ministry which is hosted using free & open source software and the access PC's for the Integrated Criminal Record System which run on Ubuntu Linux[6].
Most ICT systems are locally closed type systems. This architecture has been chosen as ostensibly more secure due to the confidential nature of the information managed (e.g. court decisions, data on land registries, criminal record information).

C) Use of basic ICT by the judges and clerks in Greece

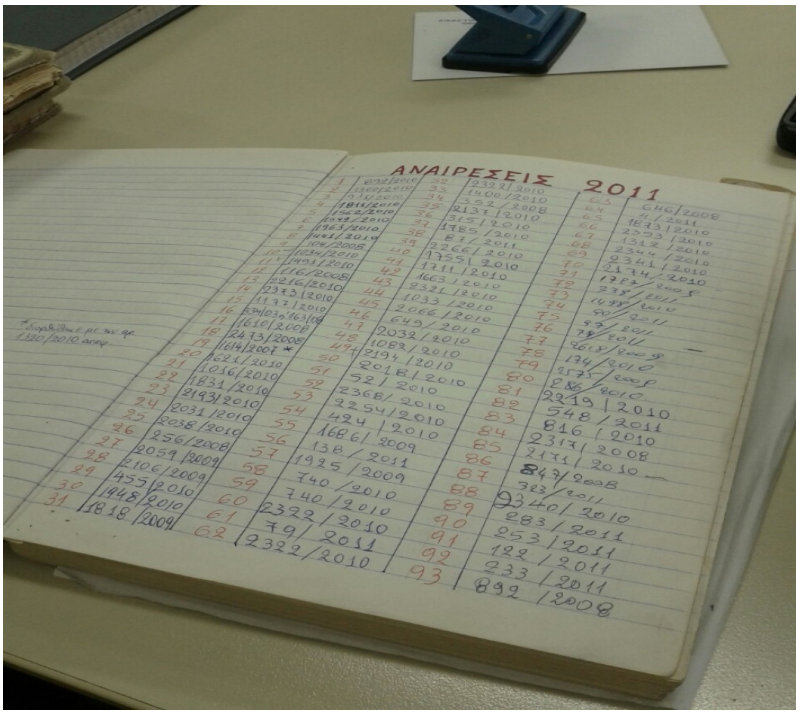
Since 2004, new judges graduating from the Greek National Judicial School have been receiving personal laptop computers. These computers are equipped with standard desktop applications (word processing, internet browser, worksheets, email applications and others) which judges are required to use in the daily performance of their duties. In the same time frame, most courts have gradually equipped all clerical staff with desktop personal computers.

Picture 1 – Archive of the Appellate Court of Thessaloniki (2015)

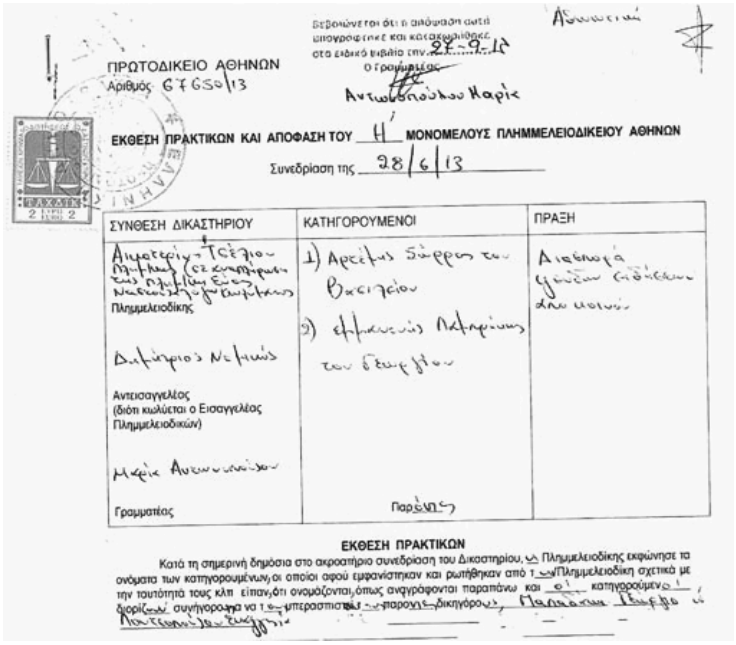
Most processes within the Greek justice system remain essentially handwritten with very little use of digital information or databases (*see* Pictures 1 & 2). Even in cases where ICT systems are used, for example word processing systems for decision drafting, the final archived product is a printout not a digital file. In most cases, digital decision files are not archived but discarded after printing. The templates for the decisions themselves have remained largely unaltered for the last 100 years (*see* Picture 3*)*.

[6] A. DELIGIANNIS, & □. PRIFTIS, *Prime Minister's e-Government Group proposals on e-Justice.* [In Greek], 2011. https://goo.gl/6N29oK

Picture 2 - Registry of 2011 cases referred to the Supreme Court (2015)



Picture 3 – Examples of Greek court decisions 1913 & 2013 (2015)



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ΣΥΝΘΕΣΗ ΔΙΚΑΣΤΗΡΙΟΥ	ΚΑΤΗΓΟΡΟΥΜΕΝΟΙ	ΠΡΑΞΗ
Πλημμελειοδίκης Δικάσιμος Νόμιμος Αντεισαγγελέας (διότι κωλύεται ο Εισαγγελέας Πλημμελειοδικών) Γραμματέας	1) 2)	

ΕΚΘΕΣΗ ΠΡΑΚΤΙΚΩΝ

Existing information systems are not interconnected. The systems are usually supported only by external actors, not employees, with significant annual costs. Most ICT systems of the Ministry of Justice do not support export or re-use of data[7]. This contributes to a relatively low diffusion of ICT systems in the Ministry of Justice as presented in the following table:

ICT Type	2010	2012	2013
Word processing	50 %	50 %	50 %
Digital Files support	50 %	50 %	50 %
E-mail	50 %	50 %	50 %
Internet connection	50 %	50 %	50 %
Electronic docket system	50 %	50 %	50 %
Court procedures ICT system	50 %	50 %	50 %
Financial management ICT system	10 %	10 %	10 %
Teleconferencing systems	10 %	10 %	10 %
Web forms	10 %	10 %	10 %
Webpage	10 %	10 %	10 %
Online tracking of case for citizens	0 %	10 %	10 %
Electronic submission of claims	10 %	10 %	10 %
Electronic tracking of small claims	0 %	10 %	10 %
Electronic submission of case files	0 %	10 %	10 %

Newly available integrated systems in operation include a National Criminal Records registry[8] and small software solutions,

[7] GREEK MINISTRY OF JUSTICE. *Greek Ministry of Justice Action Plan for eJustice - 9th edition*, 2014.
[8] *See* http://www.ncris.gov.gr

usually web-forms, used by courts for providing statistical information to the Ministry of Justice. Some electronic filing and remote monitoring of case progress applications exist in a few courts in Athens, Piraeus and to a limited extend in Thessaloniki. Use of these applications has been very limited. According to the Bar Associations of Athens and Thessaloniki only 1 percent of their members are using the systems. Finally, a new integrated digital court transcript system[9] has begun its initial deployment phase on January 2017.

§ 1 – The Integrated Judicial Case Management System (OSDDY/PP)

On September 2016, the Integrated Judicial Case Management System (OSDDY/PP)[10] begun its initial rollout. The development of this OSDDY/PP was preceded by a study to record and optimize criminal and civil procedure and information workflows. The OSDDY/PP, at this time, supports courts and prosecutor's offices in the administration of criminal and civil processes, provides services to the public and assistance in the operational functions of the courts. At this initial rollout phase judges and clerks have been instructed in the systems' use through a two-day seminar at each court.

The OSDDY/PP provides, for the first time, the ability to monitor the progress of any case introduced in the participating courts. The system went through an initial test phase during May 2016. At the same time training of end users, clerks and judges, took place. Initially the OSDDY/PP will support the Civil and Criminal courts of Athens, Piraeus, Thessaloniki, Halkida and the Supreme Court. In its second phase, the use of the OSDDY/PP will be gradually extended to courts in the rest of the country.

In its final iteration, it will also enable full electronic filing in cooperation with existing Bar Associations' ICT systems. The OSDDY/PP will also eventually provide statistical information accessible by the public and will interoperate with the National Criminal Records System, and the Detention Facilities Integrated Information System. It will also interface with the integrated courts transcripts that has recently (January 2017) begun its operation. Finally, the system also includes a provision for interoperability with external organizations such as the police and the General Secretariat for Information Systems for imposing and collecting of fines.

§ 2 – Method

The aim was to capture the usefulness, ease of use and satisfaction of use for general office applications (word

[9] *See* https://www.ospd.gr
[10] *See* https://www.solon.gov.gr

processing, spreadsheets, internet browsing, presentations, email, databases of legal information and social media) by judges and clerks as well as their willingness to use the new Integrated Judicial Case Management System (OSDDY/PP) and their reasons for doing so.

A) Sample

The sample consisted of 101 judges and clerks serving at Criminal and Civil Courts at First Instance and Appellate level. Specifically, 56 judges participated, of whom 63% women and 37% men and 45 clerks of whom 55.6% women and 44.4% men.

B) Research Tools and Procedure

Data were collected by means of a questionnaire combining features of the Technology Acceptance Model questionnaire[11] and the USE questionnaire[12] to this particular study. The questionnaire was translated and adapted from the English language and was piloted among clerks at the Appellate Court of Thessaloniki,

Demographic data was also collected for each category, namely gender, age, educational level and employment status. The perceived possible benefits or risks of introducing ICT systems to the Greek Justice system were explored through a small number of open questions.

The questionnaire was produced in two versions, an electronic and a printed one. The electronic version was sent by e-mail to all judges and clerks serving at the specific courts. The printed questionnaire was given out in three visits by the researcher to Courts departments the Courthouse of Thessaloniki to those judges and clerks available at the given times. During the survey period (October 2015 - February 2016) clerks and judges had already received trained in the use of the first version of the investigation Judicial Case Management system.

§ 3 – RESULTS

The majority of court clerks of the sample (68.9%) are between 35 and 54 years of age while 67.3% of the judges of the sample are between 45 and 64 years. Most, 42% of clerks of the sample have university education, with 22.2% having a post-graduate degree. All judges are university graduates and have studies at the National School of Judges.

The majority (97.8%) of clerks use computers that are provided by the Ministry while 94.3% of the judges are using computers

[11] F. D. DAVIS, Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, 13(3), 1989, 319–340. http://doi.org/10.2307/249008

[12] A.M. LUND, *Measuring Usability with the USE Questionnaire.* STC Usability SIG Newsletter, 8:2, 2001.

who they have obtained themselves. Clerks use computers mainly for word processing (100 %), web browsing (82.2 %) and sending email (75.6 %). Judges use computers for word processing (98.2 %), access to legal databases (94.5 %), sending email (81.8 %) and surfing the Internet (82.2 %).
The internal consistency indices of the factors was satisfactory for both questionnaires as is shown below:

FACTORS	MEAN	SD	CRONBACH
ICT Use Value	6.10	1.02	. 89
ICT Ease of Use	5.54	. 97	. 85
ICT Ease of Learning	5.52	1.16	. 91
OSDDY/PP Perceived Usefulness	5.35	1.66	. 97
OSDDY/PP Perceived Ease of Use	4.91	1.64	. 96

In terms of use value judges to a large extend feel that using ICT applications makes them more efficient (74.5%), more productive (70.9%) and find using them useful (80%). They strongly agree to have more personal time available (50.9%), to being able to carry out their tasks quickly and easily (70.4%) and see ICT use as strongly fulfilling their professional needs (67.3%).
Judges agree that computer systems are easy to use (87.3 %), simple to use (88.7 %) and easy to use without written instructions (76.6 %). In some instances (37.1%) they rely on help from their friends and colleagues to carry out ICT related tasks.
Most judges (73.6%) report that it has been relatively easy for them to learn basic ICT use and is relatively to very easy for them to remember how to use office productivity software packages (85,4%).
In terms of using the new integrated case management systems judges strongly (25.9%) or very strongly (40.7%) believe that it will allow them to carry out their tasks faster. They also agree that it would make their work easier (79.7%), improve their productivity (74.1%), efficiency (75%) and would find it useful in their work (79.6%).
Almost all clerks agree that using ICT applications makes them more efficient (93.4%), more productive (88.9%) find them useful (88.8%) and accomplish their tasks easier (93.3%) and saves them time in their work (91.1%)
Clerks state that basic ICT applications are easy to use (93.4%), simple to use (86.4%), friendly to use (88.7%) and can use them without having to use written instructions (88.7%).

Most clerks also reply that it has been easy for them to learn to use office productivity applications (88.6%), can easily remember how to use them (84.3%) and were quick to learn the required skills (86.3%).
In terms of using the new integrated case management systems clerks strongly (7.1%) or very strongly (42.9%) believe that it will allow them to carry out their tasks faster.
They agree that it would make their work easier (65.1%), improve their productivity (60.4%), efficiency (58.1%) and would find it useful in their work (55.9%).
Judges see new ICT within the ministry as a positive means of improved availability of digital case files, better data reuse, faster decision drafting, improved archiving and facilitating access to case law information databases. They also remark that the delivered integrated system increases workload and does not correspond to current workflows. They are also concerned with the possibility of data and private information leaks and the possibility of a manipulation of judges through selective presentation of case law within the integrated system.
Clerks identify the major benefits from the introduction of ICT in adopting digital case files systems, data reuse, interconnection of systems and services and offering a better service to the public. The three most important risks are identified as the possibility of data losses and personal data breaches as well as the danger of future job losses.
In answering a direct question of whether they were planning on using the new integrated case management system OSDDY/PP, despite its compulsory nature, judges responded that they intend to do so in 51.5% of cases while clerks in 41.9% of cases.

CONCLUSIONS

Although, as the results suggest, both judges and court officials are familiar with ICT technologies, mainly office productivity applications, they seem to be somewhat hesitant in using the new integrated OSDDY/PP system, clerks more so than judges. This is despite the fact that its use is a requirement in the performance of their duties and both groups perceive significant positives in the system. Clerks especially expect to find lower productivity and efficiency gains in using the new system and feel that it will be less useful in their duties compared to judges.
Practices that could improve usage potential might include improving factors that are positively correlated to ICT acceptance, particularly ease of use and ease of learning. This means meaningfully engaging end-system users at the earliest design stage, and using requirements elicitation techniques which place emphasis on constant dialogue between designers, users and system developers. In such an approach, agile development

models for example 'Living Lab' paradigms[13] might be preferable since they allow the final system to reflect simplified and improved workflows not simply the digitization of existing ones.

SUGGESTIONS FOR FUTURE RESEARCH

After a reasonable period of operation of the integrated judicial case management system (OSDDY/PP) the actual extent of use and acceptance of the system could be measured. This kind of investigation could be extended to other systems such as the integrated transcript systems, in other services for example prosecution and detention facilities as well as other geographical areas.

[13] M. ERIKSSON, V-P. NIITAMO & S. KULKKI, *State-of-the-art in utilizing Living Labs approach to user-centric ICT innovation-a European approach*. Lulea: Center for Distance-spanning Technology. Lulea University of Technology Sweden: Lulea, 2005. Online under: http://84.88.32.6/openlivinglabs/documents/SOA_LivingLabs.p